

REPORT NO. 82-2-8

3440  
APRIL 1982

POST-SUPPRESSION EVALUATION OF THE TEXAS LEAF CUTTING ANT  
ON THE KISATCHIE NATIONAL FOREST

by

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INTRODUCTION

On February 5, 1982, Forest Pest Management and Kisatchie Ranger District personnel conducted a ground survey of pine regeneration areas known to be infested with Texas leaf cutting ants (also referred to as town ants). All ant colonies located were treated with methyl bromide by Kisatchie Ranger District personnel and marked on a Forest Service compartment map. Four sites were included with a total of 22 towns treated (table 1). Weather conditions on that date consisted of overcast skies and temperatures in the 40's (conditions favorable for treatment with methyl bromide). On February 18 and March 3, 1982, a post-suppression evaluation was conducted by FPM and Kisatchie RD personnel.

TREATMENT RESULTS

Of the 22 towns treated, the following results were noted:

- 16 towns - 100% kill
- 1 town - partial but effective treatment
- 2 towns - partial but ineffective treatment (need retreatment)
- 3 towns - ineffective control (need retreatment)
- 4 towns - previously undetected (need treatment)

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Table 1. Summary of town ant ground check data for Kisatchie Ranger District.

Pre-Treatment Survey February 5, 1982							Post-Treatment Survey March 3, 1982
Regeneration Area	Compart. No.	Stand No.	Forest Type	Approx. Size (acres)	No. of Colonies	Approx. Acres Defoliated	
1	11	40	Loblolly	15	3	10	100% kill of all towns treated. No new towns detected.
2	11	5	Longleaf	40	2	10	1 town - partial but effective kill. 1 town - 100% kill.
3	11	3	Longleaf	50	2	5	100% kill of all towns treated.
4	14	17	Loblolly	150	15	Not yet planted	10 towns - 100% kill. 2 towns - partial kill; need retreatment. 3 towns - ineffective control; need retreatment. 4 new towns detected; need treatment.

#### POST-TREATMENT CONSIDERATIONS

1. Treated towns may have satellite colonies -- young, independent nests within the site of a larger nest -- which may be missed in treatment.
2. Improper fumigation may result in less than 100% kill of towns through:
  - a) The hose not guiding the fumigant deeply or directly enough into the nest center.
  - b) The amount of fumigant applied being less than sufficient for the size of the town (a minimum of 2 cans are necessary for larger towns).
  - c) Field temperatures rising beyond the 55° F. This could cause volatilization of the fumigant to occur before reaching the colony core and its queen(s), and also to result in increased numbers of foraging ants which are not subjected to the fumigation treatment.

#### RECOMMENDATIONS FOR FUTURE TOWN ANT PROBLEMS

1. Mark locations of all town ant colonies on a map as they are discovered during the timber marking or harvesting operation.
2. Survey all areas being prepared for pine regeneration for any active town ant colonies. Treat all towns before any seedlings are planted.
3. Pine regeneration areas treated with methyl bromide should be checked the subsequent year following treatment for any colonies which may again have become active or for any newly established towns. This is especially important for longleaf pine where height growth may not initiate for 3 or 4 years after planting.

Town ants are not a new problem. They were here long before the first settlers arrived. Despite the battle to wipe them out, they are as widespread today as they were 100 years ago. The problem with their control appears not to lie with the weapons employed. Methyl bromide is a heavy gas capable (on sufficiently cold days) of penetrating every gallery in the vast underground colony network. This fumigant should achieve satisfactory control, but the ants are not easily defeated. New nests can be started by queens from adjacent areas almost as fast as the old ones are poisoned. Consequently, continued vigilance is necessary in order to protect pine seedling plantations (Moser 1962).

#### LITERATURE CITED

Moser, J. C. 1962. Probing the secrets of the town ant. Forests & People, Vol. 12, No.4.